



Farm to You

Station Scripts



Station Messages

Overall Project Aim

The aim of the project is to increase the awareness in elementary school age children of the link between agriculture, nutrition & health. The messages utilize research-based information, address major health concerns of the target audience in Oklahoma and incorporate the missions of the collaborating partners including Oklahoma Cooperative Extension (OCES) Service 4-H, Family and Consumer Sciences and Agriculture Education programs, OSU Department of Nutritional Sciences, Oklahoma State Department of Health (OSDH) WIC Service, and Southwest Dairy.

Major health concerns of youth in Oklahoma include the following (Oklahoma State Department of Health, State of the State's Health Reports, 2006 & 2007).

- High prevalence of dental decay.
- Increasing rates of overweight and obesity.
- Limited physical activity.
- Low consumption of fruits and vegetables.
- High rate of smoking among adolescents & teens.

Project Description

The walk-through exhibit is a series of nine stations. Small groups of approximately eight to ten students begin the educational, interactive experience at the cheeseburger farm. They follow the food grown on the farm to market and through the body to learn how it is digested, absorbed and utilized in bones and muscles. At each station community or school volunteers use a written script to engage students in approximately a six minute dialogue and activity. Messages have been written to be age appropriate for grades 1-3 and 4-6. Corresponding Oklahoma State Department of Education Priority Academic Students Skills (PASS) have been identified for each station message.

Classrooms will be divided into small groups of 8 to 10 students to progress through the exhibit, causing some students to be delayed in beginning while others will need to wait at the end for their classmates to complete the exhibit. Physical activity dice and nutrition toss balls will be available for the small group to use during the wait time. Some students may be asked to complete pre/post evaluation surveys.

While students are progressing through the exhibit, the exhibit coordinator will be responsible for keeping time and blowing a whistle or other auditory device at six minute increments. At each auditory signal students will progress to the next station.

The exhibit is designed to *enhance* current OCES & OSDH nutrition, health and agricultural programming. For maximum impact on health related knowledge and behaviors, schools and community organizations should utilize multi-faceted approach including 1) a series of nutrition education lessons offered by OCES Healthy Oklahoma Impact Team, Community Nutrition Education Program and/or 4-H; 2) Ag in the Classroom lessons to integrate agriculture and nutrition

concepts into core curriculum, 3) Farm to You exhibit and 4) the activity newsletter to extend messages into the home environment.

Output, Outcomes & Impact

- Approximately 30,000 Oklahoma elementary school-age children will participate in the Farm-to-You, interactive, educational exhibit each year.
- Students will demonstrate increased awareness of the link between agriculture, nutrition and health.
- Students will have increased intent for increasing fat-free, low-fat or reduced-fat milk, fruit and vegetable consumption and physical activity.
- Elementary schools and community programs targeting elementary school age children will increase utilization of OCES nutrition and health programming including OCES Healthy Oklahoma Impact Team, Community Nutrition Education Program, and Ag in the Classroom as measured by an increased number of programs scheduled.

Staffing Requirements

8 - 10 community or school volunteers will be needed to help set - up and take - down the exhibit. Also, 10 volunteers are needed to deliver the station messages. Each classroom will need a teacher or another adult for each group of 8 to 10 students to accompany them through the exhibit stations.

Station 1- Farmer Pete's Garden

Key Concept:

1. Gardens and Farms provide foods like fruits and vegetables that are important for good health.

Key Outcomes:

Students in grades 1-3 will be able to:

1. State that fruits and vegetables grow in gardens and on farms.
2. Identify how these foods meet Myplate guidelines.

Students in grades 4-6 will be able to:

1. Identify key nutrients in some fruits and vegetables.
2. Understand how these foods meet the Myplate guidelines.

Student Activities:

Students will practice picking the fruits and vegetables from the garden (grades K-3).

Students will match these fruits and vegetables to the vitamins and minerals they contain (grades 4-6).

Script for grades K-3

Graphics	Script
Garden	Welcome to Farmer Pete's Garden! How many of you grow gardens at home? Did you know that people that grow gardens, like farmers, have to work very hard to make sure they have a good crop? Farmers grow all types of things, like fruits, vegetables, grains. They also raise animals that provide foods like meat and dairy. This type of work is called agriculture. Can you all say agriculture with me? Agriculture!
Myplate Graphic	Who knows what this is? <i>Refer to MyPlate graphic. Pause for responses.</i> It's MyPlate. It was developed by nutrition experts to help us know how to eat healthy.

	<p>Let's take a closer look at how farmers and MyPlate work together to help us be strong and healthy. Throughout your time here today, you will learn about all of these parts of Myplate. There are 5 parts: fruits, vegetables, protein, grains, and dairy. Try to remember to include all of these types of foods at your meals!</p> <p>Notice that $\frac{1}{2}$ of the plate is fruits and vegetables. $\frac{1}{4}$ of the plate is protein foods, and $\frac{1}{4}$ is whole grains. Also notice that dairy should be a part of each meal as well!</p>
Green section of MyPlate	<p>First we will be talking about the green section of Myplate. It is the vegetable section. Farmers grow these vegetables in green houses or fields.</p> <p>People can also grow vegetables in small gardens like these at home. <i>(Point to raised garden).</i></p>
Garden	<p>Let's practice picking some of these vegetables! Does anyone want to guess what I have grown in my garden?</p> <p><i>(Have the kids practice picking vegetables from the garden. Have them pick all of the vegetables from the side labeled vegetables. Once they have collected all the vegetables, have them return to their seats).</i></p>
Carrot	<p>We picked carrots out of the garden. Can anyone tell me why carrots are good for us?</p> <p><i>Pause for responses</i></p> <p>They are good for our eyes because they help us see! They are also good for our skin!</p>
Broccoli	<p>We also picked broccoli from our garden. Can anyone tell me why we might want to eat more broccoli?</p>

	<p><i>Pause for responses</i></p> <p>Broccoli contains a high amount of Vitamin C. Vitamin C is good for our gums and mouth. There are SO many good vegetables for us. We should make sure to eat some at each meal!</p>
Red section of MyPlate	The red section is the fruit group. Farmers also grow fruits in the gardens, or have fruit trees!
Raised garden	Can you help me pick some of these fruits from our garden? <i>(Have children collect the fruits from the raised bed and the peaches from the tree. Have them return to their seats when they have collected them all.)</i>
Strawberries and Peaches	<p>Good job! I see you picked some strawberries! Strawberries are grown in Oklahoma. Did you know they are actually our state fruit? These berries are very good for us. Like broccoli, they are also high in Vitamin C.</p> <p>Another fruit that grows well in parts of Oklahoma is the peach. Peaches grow in trees and can be picked in the summer! They are another good fruit for us to eat!</p>
Myplate Graphic	<p>Thank you so much for visiting my garden! Now we have completed these two sections (refer to red and green section) of the Myplate. Should we all try to eat more fruits and vegetables?</p> <p><i>(If time allows, have the children help you replace the fruits and vegetables in the garden and on the tree.)</i></p>

Script for grades 4-6:

Station 1- Farmer Pete's Garden	
Graphics	Script
Garden	<p>Welcome to Farmer Pete's Garden! How many of you grow gardens at home?</p> <p>Did you know that people that grow gardens, like farmers, have to work very hard to make sure they have a good crop?</p> <p>Farmers grow all types of things, like fruits, vegetables, and grains. They also raise the animals that provide foods like meat and dairy. This type of work is called agriculture.</p>
Myplate graphic	<p>Who knows what this is?</p> <p><i>Refer to MyPlate graphic. Pause for responses.</i></p> <p>It's MyPlate. It was developed by nutrition experts to help us know how to eat healthy.</p> <p>Let's take a closer look at how farmers and MyPlate work together to help us be strong and healthy. Throughout your time here today, you will learn about all of these parts of Myplate. There are 5 parts to Myplate: fruits, vegetables, protein, grains, and dairy. Try to remember to include all of these types of foods at your meals!</p>
Green section of Myplate	<p>The green section of Myplate is the vegetable section. Farmers grow these vegetables in green houses or fields.</p> <p>People can also grow vegetables in small gardens like these at home. <i>(Point to raised garden).</i></p>
Red section of Myplate	<p>The red section is the fruit group. Farmers also grow fruits in the gardens, or have fruit trees!</p>
Myplate graphic (red and green)	<p>Fruits and vegetables are very important for us to eat. As you can see, they make up half of our Myplate! Does anyone know why they are so good for us?</p> <p>They have many vitamins and minerals that keep us healthy!</p>

	<p>I have a challenge for you today. Do you think you can pick these fruits and vegetables from the garden and match them with the vitamins and minerals they are high in? Work together and then we can go over them! <i>(Pause and let students work together to first pick the fruits and vegetables from the garden and tree, and then match them to the vitamin and mineral they think they contain. Have them return to their seats when finished.)</i></p>
<p>Picture of fruits and vegetables</p>	<p><i>(Review the correct answers below with the students).</i></p> <p>Broccoli is high in potassium which is very important for the body's growth and maintenance. Our cells, muscles, and nerves all need potassium!</p> <p>Carrots are high in Vitamin A which is good for our vision!</p> <p>Strawberries and peaches are good sources of Vitamin C, which is good for our gums and mouth.</p> <p>There are many other good fruits and vegetables for us to eat! Try to eat some at every meal! We can also include fruits and vegetables in our snacks! They are quick, easy, and healthy for us!</p> <p>Before you go, can you tell me how much of your plate should be fruits and vegetables? <i>Half!</i></p>

Station 2- Pete's Chicken Coop

Key Concepts:

1. Learn about different sources of protein and why it is good for us.

Key Outcomes:

Students in grades 1-3 will be able to:

1. Identify foods high in protein
Understand that farmer's play a crucial role in providing these foods.

Students in grades 4-6 will be able to:

1. Identify foods high in protein

2. Understand that farmer's play a crucial role in providing these foods.

Student Activities:

Students in grades 1-3 practice collecting eggs from the chicken coop.

Students in grades 4-6 will collect eggs with pictures of different types of protein.

Suggested Costume for Presenter:

Overalls

Script for grades K-3:

Station 2- Pete's Chicken Coop	
Graphics	Script
Chicken Coop	<p>Welcome to my chicken coop! Here we get to learn about why we need protein to keep us healthy and strong.</p> <p>Have any of you seen a chicken coop before? <i>Allow a brief time for students to raise their hands.</i></p> <p>Chicken coops keep the chickens safe and give them a place to live! Farmers and other people that raise chickens must check the chicken coop every day in order to collect something. Can anyone tell me what we get from chickens? <i>Eggs!</i></p>
Picture of eggs inside of chicken coop	<p>Farmers collect these eggs every day in order to keep the chicken coop clean and to protect the eggs from breaking. I think there might be a couple eggs to pick up in my chicken coop. Can someone help me pick up the eggs in this coop? <i>(Have the students collect all of the eggs inside of the chicken coop and place them in the basket. Once they are finished, have them return to their seats.)</i></p>
Picture of different colored eggs	<p>Thank you for collecting these eggs for me! I notice that some of these eggs are different colors. Does anyone know why that might be? <i>(wait for responses).</i></p> <p>Different kinds, or breeds, of chickens lay</p>

	<p>different color eggs. They might look different on the outside, but on the inside they are the same. They taste the same and they have the same amount of protein and other nutrients to help us grow and be healthy. Protein keeps our muscles strong and healthy!</p> <p>Once we collect the eggs we can wash or wipe them to clean them, and then store them in the refrigerator until we are ready to cook them! How many of you like to eat eggs?</p>
Protein part of Myplate	This picture shows that $\frac{1}{4}$ of our plates should be protein! Besides eggs, other good sources of protein are beef, fish, and even beans! Farmers raise all of these types of animals and plants!
Myplate graphic	<p>Thanks for visiting my chicken coop! I hope you all remember to eat protein at your meals. Before you leave, can you remind me how much of Myplate is protein?</p> <p><i>1/4</i></p>

Script for grades 4-6:

Station 2- Pete's Chicken Coop	
Graphics	Script
Chicken Coop	<p>Welcome to my chicken coop! Here we get to learn about why we need protein to keep us healthy and strong.</p> <p>Have any of you seen a chicken coop before? <i>Allow a brief time for students to raise their hands.</i></p> <p>Chicken coops keep the chickens safe and give them a place to live! How often do you think we need to check the chicken coop for new eggs?</p> <p><i>Every day</i></p> <p>Why are eggs good for us to eat? What nutrient do they have? <i>Protein!</i></p>

<p>Purple Section of Myplate</p>	<p>Protein is very important for us. It helps us have strong muscles. I have some pictures here of different foods.</p> <p>As you can see on this picture, $\frac{1}{4}$ of our plates should be made of protein. Do you think you all can tell me if they are good sources of protein?</p>
<p>Pictures of foods high in protein</p>	<p><i>(Have the students collect the egg pictures from the chicken coop. Each has a picture on the back of a type of food. Have the kids work together to divide the pictures into 2 groups-foods high in protein and foods that aren't high in protein. Once they are finished, go over the correct answers with them).</i></p> <p>The foods high in protein that we found are eggs, chicken, beef, fish, and beans. Make sure to include these foods at each meal in order to grow healthy and strong!</p>
<p>Picture of different colored eggs</p>	<p>Thank you for collecting these eggs for me! I notice that some of these eggs are different colors. Does anyone know why that might be? <i>(wait for responses).</i></p> <p>Different kinds, or breeds, of chickens lay different color eggs. They might look different on the outside, but on the inside they are the same. They taste the same and they have the same amount of protein and other nutrients to help us grow and be healthy.</p>
<p>Myplate Graphic</p>	<p>Good job! We learned that all different types of meat and beans are good sources of protein. Farmers make it possible for us to have all of these types of protein.</p> <p>Thanks for your help today! Before you leave, can you remind me how much of our plates should be protein at each meal? <i>1/4</i></p>

Station 3-Dairy Farm

Key Concept:

1. Dairy foods are an important part of our diet.

Key Outcomes:

Students in grades 1-3 will be able to:

1. Know that milk comes from cows.
2. Identify cheese and yogurt as foods made from milk
3. Identify milk and dairy foods as a food group on MyPlate.

Students in grades 4-6 will be able to:

1. Know that milk comes from cows.
2. Identify milk and dairy foods as a food group on MyPlate.
3. Identify the nutrients and minerals in dairy foods and how they are used by the body.

Student Activities:

Students will practice milking the dairy cow (grades K-3).

Students will match the dairy cow facts. (grades 4-6).

Suggested Costume for Presenter

Dairy apron

Script for grades K-3:

Station 3- Pete's Dairy Farm	
Graphics	Script
Dairy Cow/Dairy Farm	Welcome to my Dairy Farm! This is where farmers raise cows so that we can have milk to drink! Have any of you been to a dairy farm before? How many of you have milked a cow? Cows are a very important part of agriculture, especially in Oklahoma. Cows provide us with milk, which is very important for us. Milk is so important that Oklahoma made it the state's beverage! Let's all give a cheer for milk!!

	<p>Cheer, cheer for milk! Cows belong to a group of animals called mammals. That means they make milk for their young to drink. This milk is also an important food for people. Dairy farmers work very hard to take care of the cows to make sure we can have milk and other dairy foods. Do you know how many times a cow gets milked each day?</p> <p><i>2-3 times per day.</i></p> <p>Do you know how many gallons of milk a dairy cow provides each day?</p> <p>6-7 gallons! That is 100 cartons of milk!</p> <p>Do you agree that cows are important farm animals that help you have lunch at school?</p>
Dairy Cow	<p>Dairy cows are very large animals. One cow weighs about 1400 pounds! It would take about 28 kids like you to weigh that much!</p> <p>To stay healthy, cows eat mostly grass, hay, and grains. Cows have a special stomach that allows them to digest these grains so that they can get all of the nutrients they need to make milk. They will eat about 100 pounds of this food each day and drink about a bathtub full of water every day! <i>(Refer to bucket of grain)</i></p>
Cheese, ice cream, butter, yogurt	<p>We can use milk to make other foods. Does anyone know what these foods are?</p> <p><i>Cheese and yogurt!</i> <i>(Some students might also identify foods such as pudding, ice cream, and butter. If so, acknowledge that they are made from milk, but that they are sometimes foods, not all the time foods.)</i></p> <p>Milk and foods made from milk are so important to our good health that they have a special place on MyPlate. <i>(Point to blue circle.)</i></p> <p>This tells us that milk or a food made from milk should be a part of every meal!</p>
Bones	Does anyone know why it is important to include

	<p>these dairy foods in our meals? Dairy foods are important because they help make our bones strong.</p>
Dairy Cow	<p>Now that we have talked about all of these important reasons to drink milk, and eat foods made from milk, would you like to see how a cow gets milked? (Demonstrate how to milk the cow, allowing each student to take a turn).</p>
Milking Parlor	<p>Great job! Some farms also use machines to milk the cows. This picture shows what these milking parlors look like. This way, they can get the job done much more quickly!</p>
Drinking milk pics	<p>Thank you for stopping by my dairy farm. Make sure to include some milk, cheese, or yogurt at each meal so that you can have strong bones!</p>

Script for grades 4-6:

Station 5 - Dairy Farm	
Graphics	Script
Dairy cows	<p>Welcome to my Dairy Farm! This is where farmers raise cows so that we can have milk to drink! Have any of you been to a dairy farm before? How many of you have milked a cow?</p> <p>Cows are a very important part of agriculture, especially in Oklahoma. Milk is so important that Oklahoma made it the state's beverage! Let's all give a cheer for milk! Cheer, cheer for milk!</p> <p>Cows belong to a group of animals called mammals. That means they make milk for their young to drink. This milk is also an important food for people. Dairy farmers work very hard to take care of the cows to make sure we can have milk and other dairy foods.</p>

	<p>Would you agree that cows are important farm animals that help you have lunch at school?</p>
<p>Question mark</p>	<p>I have some clues here that will help us find out more about dairy cows and why it is such an important part of agriculture. I will hand out these questions to you. Please work together to place them to the correct answers that are on the cow! When you are done we will review the correct answers together. <i>(Allow students enough time to pair the questions with the answers on the cow).</i></p> <p>How many gallons of water do dairy cows drink/day? <i>25-50 That is about the amount it takes to fill a bath tub!</i></p> <p>How many gallons of milk does the average cow produce each day? <i>6-7 That is equal to 100 school-size cartons of milk!</i></p> <p>How many pounds of feed (typically grass and corn) do milking cows need to eat each day? <i>100</i></p> <p>This type of food is made from the cream of the milk that cows produce? <i>Ice cream, butter</i></p>
<p>Dairy Cow</p>	<p>Great job! Cows get milked 2-3 times/day. Many farmers use machines to milk their cows. <i>(Refer to picture).</i> Some still milk the cows themselves. This is how a farmer would milk a cow. <i>(Demonstrate milking the cow).</i></p>
<p>Myplate Graphic</p>	<p>As you can see, MyPlate also includes dairy at every meal. Does anyone know why we need to drink milk or eat other types of dairy foods? <i>(Allow time for responses).</i></p> <p>Milk is a good source of Calcium and often also a good source of Vitamin D and B12. Calcium and Vitamin D are needed to grow bones and keep bones strong. They protect against brittle bones called osteoporosis.</p> <p>What are other foods that are in the dairy group? <i>Yogurt, cheese, ice cream</i></p>

Dairy Cow	Thanks for stopping by to learn about my dairy farm! Don't forget to include dairy at each meal.
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Station 4-Grains

Key Concept:

1. Grains are an important part of our diet and part of the MyPlate recommendations.

Key Outcomes:

Students in grades 1-3 will be able to:

1. Discuss where grains grow, that they are harvested, milled, and made into foods.
2. Identify two different grain foods as part of MyPlate.

Students in grades 4-6 will be able to:

1. Discuss where grains grow, that they are harvested, milled, and made into foods. Identify grain foods as part of MyPlate.
2. Discuss that half our grains should be whole and how grains fit into the MyPlate.
3. Use the food label to identify a whole grain food.

Student Activities:

Students will learn about the different types of grains and what they look like on our plate (grades K-3).

Students will learn what words to look for on food labels to ensure that half of their grains are whole (grades 4-6).

Script for grades K-3:

Station 4- Grains	
Graphics	Script
Wheat Picture	Welcome to the grains station! One of the most common grains grows right here in Oklahoma!! Who can tell me what this plant is called? <i>(Point to</i>

	<p><i>wheat plant).</i></p> <p>Wheat! It is one of our main crops.</p>
Picture of combine	<p>When wheat is golden brown, it is ready to be harvested by a machine called a combine. After harvest, it is taken to a mill and ground into flour. The flour is then used to make foods like pasta, tortillas, bread, and cereals. <i>(Refer to these artificial foods).</i></p>
Grains Picture	<p>Besides wheat, there are many other types of grains that we eat. Do any of you recognize some of these other grains? <i>(Point to other grains: oatmeal, brown rice, barley, rye)</i></p> <p>These are just some of the types of grains, and different types of grains are popular in different parts of the world.</p>
Grains	<p>Like wheat farmers, other types of farmers grow their grains in fields too! Here are some pictures of what they look like when the farmers take care of them. These are some examples of the foods that we eat that come from these plants.</p> <p><i>(Show the students the pictures of what the different types of plants look like when they grow, and then the type of food they get made into: wheat becomes whole wheat bread, corn kernels become corn tortillas and popcorn, oats become oatmeal, and the rice plant becomes brown rice).</i></p>
Myplate Graphic	<p>Where are the grains on MyPlate? As you can see, grains should also be part of every meal. They should make up $\frac{1}{4}$ of our plates.</p> <p>Does anyone know why we need to have these whole grains? (Pause for responses). Grains give us energy to grow and play!</p> <p>When we eat foods made from whole grains, like</p>

	the ones you have just seen, they help our intestines, which we'll learn more about in the body.
Myplate	You have now learned how farmers work hard growing many different types of foods for us! You also have learned about all 5 of the food groups: fruits, vegetables, protein, dairy, and grains! Now that you have learned about growing all of these foods, we are ready to talk about how these foods get digested and how they play a role in keeping our bodies healthy! Your next stop will be the Mouth!

Script for grades 4-6:

Station 4- Grains	
Graphics	Script
Wheat picture	<p>Welcome to the grains station! One of the most common grains grows right here in Oklahoma! Who can tell me what this plant is called? (<i>Point to wheat plant</i>).</p> <p>Wheat! It is one of our main agricultural crops.</p>
Picture of combine	<p>When wheat is golden brown, it is ready to be harvested by a machine called a combine. After harvest it is taken to a mill and ground into flour. The flour is then used to make foods like pasta, tortillas, bread, and cereals.</p>
	<p>Besides wheat, there are many other types of grains that we eat. Do any of you recognize some of these other grains? (<i>Point to other grains: oatmeal, brown rice, barley, rye</i>)</p> <p>These are just some of the types of grains, and different types of grains are popular in different parts of the world.</p>
	<p>(Show the students the pictures of what the different types of plants look like when they grow, and then the type of food they get made into: wheat becomes whole wheat bread, corn kernels become corn tortillas and popcorn, oats become oatmeal, and the rice plant becomes brown rice).</p>

	<p><i>(Ask the students to match the picture of the plant to the food that it will produce.)</i></p>
<p>Myplate Graphic</p>	<p>Grains make up $\frac{1}{4}$ of Myplate. It is recommended that we try to make $\frac{1}{2}$ of our grains whole grains. Does anyone know what whole grains mean? <i>(Allow time for responses.)</i></p> <p>Whole grains mean that we eat the entire part of the grain seed or kernel. This allows us to get all of the important nutrients from these grains.</p> <p>Why is it important that we eat whole grains? <i>(Allow time for responses)</i></p> <p>Grains provide carbohydrates and B-vitamins. The carbohydrates are important for energy needed for sports, dance, and just being active! The B-vitamins help us turn carbohydrates and proteins into energy our body can use!</p> <p>Whole grains also provide fiber that helps our intestines stay healthy, which we'll learn more about at another station.</p> <p>To find out if a food has whole grains, look for the word "whole" on the ingredient list on the food label.</p> <p>I have some examples of ingredients on these labels. Can you help me find out which of these foods contains whole grains?</p>
	<p>You have now learned how farmers work hard growing many different types of foods for us! When you use the MyPlate to help you choose the kind and amount of foods you eat you will have the energy and nutrition you need to keep your body healthy. Your next stop will be the Mouth where you will start the journey of learning how food is digested and used by your body to stay healthy!</p>

Station 4 - Mouth

Key Concepts:

2. You need a healthy mouth to enjoy your food.

Key Outcomes:

Students in grades 1-3 will be able to

1. Demonstrate how to floss and brush teeth properly.

Students in grades 4-6 will be able to

2. Identify use of tobacco products with mouth and lung diseases.

Student Activities:

Students in grades 1-3 use small gauge rope to practice properly flossing teeth.

Students in grades 1-3 observe good technique for brushing teeth.

Students observe a model of a mouth that is diseased due to tobacco use.

Students in grades 4-6 compare and contrast the function of a healthy and diseased lung model.

Suggested Costume for Presenter:

Orange scrub shirt.

Script for grades K-3:

Station 4 - Mouth	
Graphics	Script
Body with mouth highlighted	You are here in the body. <i>Point to the mouth.</i>
Farmer Pete surrounded by low-fat dairy foods such as low-fat milk, yogurt, low-fat cheese	How many of you have lost some of your baby teeth and have new teeth? <i>Allow a brief time for students to raise their hand?</i> How long do your new teeth have to last? <i>All your life!</i> That's right; your new teeth have to last the rest of your life! Making healthy food choices is one way you can keep your teeth healthy for a really long time. Which foods from the farm help build strong teeth? <i>(dairy foods)</i> Look at your food sticker and raise your hand and if you are a dairy food (blue sticker). What are some foods in the dairy group? <i>Point to the food surrounding Farmer Pete. (milk, yogurt and cheese)</i>

	<p>That's right. Milk and other dairy foods contain a nutrient called calcium which helps make the outside of your teeth hard.</p>
<p>Farmer Pete surrounded by fruits and vegetables.</p>	<p>There are other foods that also help build strong teeth. Farmer Pete is giving us a hint, what are they? <i>Point to the food surrounding Farmer Pete. (broccoli, strawberries and oranges)</i></p> <p>They give us a nutrient called vitamin C that helps keep our gums healthy.</p> <p>Look at your food sticker and raise your hand if you are a vegetable (green sticker) or fruit (red sticker).</p>
<p>Farmer Pete brushing his teeth.</p>	<p>What happens when we don't clean food off of our teeth? <i>Bacteria grow which causes bad breath and dental decay or cavities.</i></p> <p>What can you do to keep your mouth clean? <i>Brush and floss teeth.</i></p> <p><i>Demonstrate brushing in circles on clean mouth/dirty mouth model.</i></p> <p>When you brush your teeth move the brush in little circles over each tooth. This helps the bristles get between the teeth.</p> <p>A toothbrush can't reach all of the tiny food pieces that get stuck between your teeth. Flossing can help remove the food that gets stuck. <i>Give each pair of students a short rope. Demonstrate to students how to floss teeth by putting the rope on the floor and gently moving it up and down next to the tooth stool. Allow a few seconds to do this. Collect ropes.</i></p>
<p>Tobacco products "X" across items.</p>	<p>Besides drinking plenty of milk, eating fruits and vegetables and brushing and flossing your teeth there is one more thing you must do. What do you think it is? <i>Don't smoke. -</i></p> <p>That's right, Be tobacco free!</p> <p>What does that mean?</p> <p><i>Show diseased (smoker's) mouth model.</i></p> <p>This is what a tobacco user's mouth looks like inside. <i>Gently push lips away from teeth and show gum disease and tooth decay. Also point out sores on the tongue and lip.</i></p>

	<p>Do you think this person's teeth are going to last the rest of their life?</p> <p><i>No</i></p>
Healthy smile.	<p>We talked about how the tongue helps us taste food. It is also a muscle that rolls chewed-up food into a ball and pushes to it to the back of your mouth so it can be swallowed. Are you ready to be swallowed?</p> <p><i>Point to the narrow walkway to the stomach.</i></p> <p>As you go to the next section of the Farm to You adventure, wrap your arms around yourself and squeeze.</p>

Script for grades 4-6:

Station 4 - Mouth	
Graphics	Script
Body with mouth highlighted	<p>You are here in the body. The mouth gives us clues about how food taste. If you don't take care of your mouth think of all the wonderful clues you will miss.</p>
A smile	<p>Your mouth has several types of tissues that have different jobs important to your hunt for good Health.</p> <p>Why are healthy gums important? <i>They protect the bones that hold teeth in our mouth.</i></p> <p>What does the tongue do? <i>Helps taste food, helps us talk, helps us swallow</i></p> <p>What are the different flavors we taste? <i>(Sweet, salty, sour and bitter)</i></p>
Farmer Pete surrounded by low-fat dairy foods such as low-fat milk, yogurt, low-fat cheese	<p>Which food group contains foods that help build healthy teeth? <i>dairy foods</i></p> <p>What is an important nutrient in dairy foods that makes teeth hard? <i>Calcium</i></p>
Farmer Pete surrounded by fruits and vegetables	<p>Vitamin C rich foods help, keep gums healthy. A clue you might not be getting enough Vitamin C is if your gums bleed, especially when you brush your teeth. Can you name some foods rich in Vitamin C? <i>Citrus fruits, tomatoes, broccoli, cabbage, bell peppers, mango, strawberries, spinach</i></p>
Farmer Pete brushing teeth.	<p>What does hygiene mean? <i>Keeping your body clean.</i></p>

	<p>What is an important hygiene habit that will keep your mouth healthy and your breath fresh? <i>Brushing and flossing teeth</i></p>
<p>Tobacco products "X" across items</p>	<p>Besides drinking plenty of milk, eating fruits and vegetables and brushing and flossing your teeth there is one more thing you must do to keep your mouth healthy. What do you think it is? <i>Don't smoke. -</i> That's right, Be tobacco free! What does that mean? Don't smoke or use smokeless tobacco.</p> <p><i>Show diseased (smoker's) mouth model.</i> This is what a tobacco user's mouth looks like inside. <i>Gently push lips away from teeth and show gum disease and tooth decay. Also point out sores on the tongue and lip.</i></p> <p>What other kinds of disease is related to smoking? <i>Lung cancer and emphysema</i></p> <p><i>Show the Lou-Wheeze lung model</i> Meet Lou-Wheeze. One of her lungs is healthy and the other is diseased. Smoking can cause lung cancer and a disease called emphysema. It puts holes in the lungs and makes it almost impossible to breath. <i>Step slowly on the pump 3 consecutive times to inflate the healthy and diseased lung. <u>Please do not encourage student's use of the pump.</u></i></p> <p>What differences do you see in the way the healthy lung works compared to the diseased lungs? <i>The diseased lung inflates and deflates slower than the healthy lung.</i></p>
<p>Healthy smile.</p>	<p>Once again, you have discovered clues to keep your mouth and teeth healthy. Can you tell me what they are? <i>Drink milk/eat dairy foods</i> <i>Eat fruits and vegetables</i> <i>Brush your teeth</i> <i>Don't use tobacco products</i></p> <p>As you go to the next section of the Farm to You adventure, wrap your arms around yourself and squeeze.</p>

Station 5 - Stomach

Key Concepts:

1. Feelings of fullness/hunger are cues to help control eating.
2. The stomach is part of the digestive system.
3. Foods are broken down into nutrients that are used to help the body grow and be healthy.

Key Outcomes:

Students will be able to

1. Relate feelings of fullness and hunger as cues to control eating.
2. Describe what happens to food in the stomach.

Student Activities:

Students pass through the esophagus and enter the stomach.
 Students compare inflation of a balloon to feelings of hunger and fullness.
 Students discuss how food is digested into different nutrients.

Script for grades 1-3:

Station 5 - Stomach	
Graphics	Script
Body with stomach highlighted	<p>Welcome to the stomach. You are here in the body; (point to the highlighted stomach) you were just squeezed through a tube that connects the mouth to the stomach. Does anyone know what it is called?</p> <p><i>Esophagus</i></p>
Mouth, esophagus and stomach	<p><i>Show the 10" plastic tubing to illustrate the esophagus. Place one end at the bottom of your neck, letting it extend to the top of your abdomen.</i></p> <p>The esophagus is about 10 inches long in an adult and about $\frac{3}{4}$ inch in diameter.</p> <p>How long do you think it takes food to go through the esophagus? <i>Pause briefly for one or two responses.</i></p> <p>Food passes quickly through the esophagus in about 4 to 6 seconds. Liquid and soft foods move even faster.</p>
Stick drawing of people depicting fullness and hunger.	<p>An important clue that many people miss is listening to their stomach to know when they have eaten the right amount of food.</p>

	<p>A few ways you can make sure you're eating the right amount of food is to compare your food to the size of these items (refer to deck of cards, baseball, computer mouse).</p> <p>You can use the deck of cards to compare your meat serving. Next time you order a hamburger look to see if the meat is about the size of these cards. <i>Show students the deck of cards and the hamburger patty side by side.</i></p> <p>You can use a computer mouse to compare to your potatoes or vegetables. <i>Show students the computer mouse and the cauliflower.</i></p> <p>Lastly, a baseball is about the size of a serving of fruit or vegetable. <i>Show students the baseball and a piece of fruit or $\frac{1}{2}$ cup serving of vegetable side by side.</i></p> <p>Now let's try and fill this plate with correct size portions, using the deck of cards, computer mouse and baseball method that we just discussed. <i>Have one student pick a food to fit in the portion plate. Discuss if it is the correct serving size.</i></p> <p>If you get full before you eat this amount of food, it's okay to stop eating. And if you are still hungry it's okay to eat a little more. The important thing is to eat slowly and listen to your stomach to know you have eaten the right amount of food.</p> <p><i>Let's review-how do you know when you have eaten the right amount of food for you.</i> <i>Stop eating when you feel full, not stuffed.</i></p>
<p>Pieces of food being divided into smaller pieces</p>	<p>Your stomach squeezes and mashes foods into small pieces with a churning action. This is called digestion. Say digestion with me. Digestion.</p> <p>The very small pieces are called nutrients. Foods from the different food groups (<i>refer to MyPlate on the exhibit wall</i>) give us different kinds of nutrients. Each nutrient has a special job to do in your body. <i>Refer to the child's body on the exhibit.</i></p>
	<p>Why do we need to eat foods from all the food groups? <i>To get different nutrients.</i></p> <p>In the next part of the Farm to You adventure you will</p>

	learn how the nutrients get into your blood and go to the part of your body where they work. Have fun!
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Script for grades 4-6:

Station 5 - Stomach	
Graphics	Script
Body with stomach highlighted	<p>Welcome to the stomach. You are here in the body; (point to the highlighted stomach) you were just squeezed through a tube that connects the mouth to the stomach. Does anyone know what it is called?</p> <p><i>Esophagus</i></p>

Mouth, esophagus and stomach	<p><i>Show the 10" plastic tubing to illustrate the esophagus. Place one end at the bottom of your neck, letting it extend to the top of your abdomen.</i></p> <p>The esophagus is about 10 inches long in an adult and about $\frac{3}{4}$ inch in diameter.</p> <p>How long do you think it takes food to go through the esophagus?</p> <p><i>Pause briefly for one or two responses.</i></p> <p>Food passes quickly through the esophagus in about 4 to 6 seconds. Liquid and soft foods move even faster.</p> <p>What clue does the food group give us?</p> <p><i>The kind of nutrient the food provides.</i></p> <p><i>Refer to the MyPlate and body of child on exhibit walls during the following dialogue.</i></p> <p>Foods in the same food group have similar kinds of nutrients. Let's investigate beginning with grains.</p> <p>The main nutrient in grain foods is Carbohydrates. Carbohydrates give body cells energy. Which body cells need the most energy? <i>Pause briefly</i></p> <p><i>Muscle cells.</i></p> <p>Which body cells need carbohydrates to think?</p> <p><i>Pause briefly</i> <i>Brain cells.</i></p> <p>Vegetables and fruits are good sources of vitamins A and C.</p>
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	<p>Vitamin A is important for eye health, especially night vision and skin health. Vitamin C helps build collagen, which helps cuts and scrapes heal.</p> <p>Milk and dairy products are good sources of Calcium. Why is calcium important? <i>Calcium helps keep bones & teeth strong and healthy.</i></p> <p>Meat, beans, nuts and eggs are part of the Protein food group in MyPlate.</p> <p>Why is protein important? <i>Pause briefly</i> <i>Protein builds and repairs body tissues.</i></p>
<p>Stick drawing of people depicting fullness and hunger.</p>	<p>An important clue that many people miss is listening to their stomach to know when they have eaten the right amount of food</p> <p>A few ways you can make sure you're eating the right amount of food is to compare your food to the size of these items (refer to deck of cards, baseball, computer mouse).</p> <p>You can use the deck of cards to compare your meat serving. Next time you order a hamburger look to see if the meat is about the size of these cards. <i>Show students the deck of cards and the hamburger patty side by side.</i></p> <p>You can use a computer mouse to compare to your potatoes or vegetables. <i>Show students the computer mouse and cauliflower side by side.</i></p> <p>Lastly, a baseball is about the size of a serving of fruit or vegetable. <i>Show students a baseball and a piece of fruit or $\frac{1}{2}$ cup serving of vegetable side by side.</i></p> <p>If you get full before you eat this amount of food, it's okay to stop eating. And, if you are still hungry it's okay to eat a little more. The important thing is to eat slowly and listen to your stomach to know you have eaten the right amount of food?</p>
	<p>Let's be sure you got some of the important clues.</p> <p>Food is digested into what in the stomach? <i>Nutrients</i></p>

	<p>If you can't see at night what should you eat more of? <i>Vitamin A or fruits and vegetables</i></p> <p>If your gums bleed when you brush your teeth what should you eat more of? <i>Vitamin C or fruits and vegetables</i></p> <p>What part of your digestive system gives you clues to control food intake? <i>Stomach</i></p> <p>Congratulations! You have discovered clues about how food is digested into nutrients that help your body be healthy. The next mystery is how those nutrients get to where they need to be.</p>
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Station 6 - Small Intestine

Key Concepts:

1. The nutrients in food are absorbed in the small intestine.
2. Fiber helps keep the small intestines healthy.

Key Outcomes:

Students will be able to

1. Discuss what happens to food in the small intestine.
2. Name foods high in fiber.

Student Activities:

Students walk through a maze with "villi" suspended from the ceiling.
 Students use the scientific process to predict and observe absorption.

Suggested Costume for Presenter:

Script for grades 1-3:

Station 6 - Small Intestine	
Graphics	Script
	Welcome to the small intestine. Please sit down.
Body with small intestine highlighted	<p>You are here in the body. <i>Point to the highlighted small intestine. Ask students to place their hands over their small intestine (lower part of abdomen).</i></p> <p>How long do you think the small intestine is? <i>Wait for response.</i></p> <p><i>Ask a student to slowly pull the rope out of the container.</i> The intestine is about 20 feet or about as long as a school bus.</p>
Villi in the intestine	<p>The inside of the small intestines is covered with villi (<i>vil-i</i>). Say villi with me. Villi. <i>Point to villi hanging from ceiling or graphic on exhibit wall.</i></p> <p>They look like tiny, little hairs. <i>Refer to the picture of the villi on exhibit wall.</i></p> <p>The villi's job is to move the nutrients from the digestive system into the blood. Let's use the scientific process to understand how it works. First, let's predict what will</p>

	<p>happen when the corner of a paper towel is placed into water. What do you think will happen? <i>The water is absorbed by the paper towel.</i></p> <p><i>Demonstrate placing a small corner of a white paper towel into water.</i></p> <p>What happened when the paper towel touched the water? <i>Some of the water was absorbed by the paper towel.</i></p> <p>Was your prediction correct?</p> <p>The villi absorb nutrients like a paper towel absorbs water.</p> <p>After the nutrients go into the villi they keep going through the intestinal wall and into your blood. The blood takes the nutrients to the parts of the body where they are needed.</p>
Farmer Pete showing 60 % of body is water.	<p>To help the nutrients travel in the blood we need water. Did you know that more than half of our body is water! We lose water when we sweat, so it's especially important to drink extra water when you are running and playing.</p>

<p>Fruits, vegetables and whole grains, nuts and beans Broom</p>	<p>The other thing our intestines need to stay healthy is fiber. We get fiber from plant foods. Which food groups include plants? <i>Grains, vegetables and fruits</i></p> <p>There are two other foods that come from plants and have fiber. Here is a riddle to help you: I can grow into a tree if a squirrel doesn't eat me. What am I? <i>Nuts.</i> The other food is beans.</p> <p>Fiber is important because it acts like a broom (<i>refer to broom</i>) by cleaning out the waste, keeping the intestines clean and healthy.</p>
	<p>When are two times you should drink more water? <i>When the weather is hot; when exercising and sweating.</i></p> <p>Do you remember a food that has fiber? <i>Show food items in basket: Fruits, vegetables, beans, nuts, grains</i></p> <p>Good job. Now you are ready to follow nutrients to learn how they work in different parts of the body.</p>

Script for grades 4-6:

Station 6 - Small Intestine	
Graphics	Script
	<p>Welcome to the small intestine. Please sit down.</p>
Body with small intestine highlighted	<p>You are here in the body. <i>Point to the highlighted small intestine. Ask students to place their hands over their small intestine (lower part of abdomen).</i></p> <p>How long is the small intestine? <i>Wait for response.</i></p> <p><i>Ask a student to slowly pull the rope out of the container.</i> The intestine is about 20 feet or about as long as a school bus.</p>
Villi in the intestine	<p>The inside of the small intestines is covered with villi (<i>vil-i</i>). <i>Point to villi hanging from ceiling or graphic on exhibit wall.</i></p> <p>They look like tiny, little hairs. <i>Refer to the picture of the villi on exhibit wall.</i></p> <p>The villa's job is to move the nutrients from the digestive system into the blood. Let's use the scientific process to understand how it works. First, let's predict what will happen when the corner of a paper towel is placed into water. What do you think will happen? <i>The water is absorbed by the paper towel.</i></p> <p><i>Demonstrate placing a small corner of a white paper towel into water.</i></p> <p>What happened when the paper towel touched the water? <i>Some of the water was absorbed by the paper towel.</i></p> <p>Was your prediction correct?</p> <p>The villi absorb nutrients like a paper towel absorbs water.</p> <p>After the nutrients go into the villi they keep going through the intestinal wall and into your blood. The blood takes the nutrients to the parts of the body where they are needed.</p>
Farmer Pete showing 60 % of body is water.	<p>To help the nutrients travel in the blood we need water. Did you know that more than half of our body is water! We lose water when we sweat, so it's especially important to drink extra water when you are running and playing.</p>

<p>Fruits, vegetables and whole grains, nuts and beans Broom</p>	<p>Our intestines also need fiber to stay healthy. We get fiber from plant foods. What are three food groups that provide fiber? <i>Grains, vegetables and fruits.</i></p> <p>There are also two foods in the meat group that come from plants and that are good sources of fiber. Do you know what they are? <i>Pause for response. If help is needed give the following clues:</i></p> <p>Here is a clue to help you: I come from a plant and squirrels like to eat me. What do you think they are? <i>Nuts.</i></p> <p>The other one is a popular Hispanic food. <i>beans</i></p> <p>Fiber is important because it acts like a broom (<i>refer to broom</i>) by cleaning out the waste products in our intestines.</p>
	<p>When are two times you should drink more water? <i>When the weather is hot; when exercising and sweating.</i></p> <p>Do you remember a food that has fiber? <i>Show food items in basket: Fruits, vegetables, beans, nuts, grains</i></p> <p>Good job. You have discovered some important clues to good digestive health.</p>

Station 8 - Muscles

Key Concepts:

1. Muscles need foods rich in protein and carbohydrates.
2. Exercise helps make muscles strong and flexible.

Key Outcomes:

Students will be able to

1. Name foods that help muscles grow.
2. Name foods that give muscles energy.
3. State an activity that strengthens muscles.

Student Activities:

Students feel muscles move.

Students use resistance bands to participate in a stretch and strengthening exercise.

Script for grades K-3.

Station 9 - Muscles	
Graphics	Script
Farmer Pete flexing arm muscle.	<p>Now you are in the muscle. Without muscles you wouldn't be able to move!</p> <p>Everyone flex your arm muscle and place your hand on top of your bicep. <i>Straighten and bend arm as students follow.</i></p> <p>Feel the muscle on the top or your arm moving. It is called the biceps muscle. Now feel the muscle on the bottom of your arm above your elbow. It is called the triceps muscle.</p>
Muscles in the body.	<p>Muscles are in all parts of our body. We have 636 different muscles.</p>

Pork chop, cheese, banana, bagel, sweet potato	<p><i>Show muscle replica</i></p> <p>This is what one pound of muscle tissue in our body looks like. It needs foods from all the food groups to be healthy and strong.</p> <p><i>Show fat tissue replica</i></p> <p>And this is what one pound of fat tissue in our body looks like. We need to exercise so we gain muscle instead of fat tissue. Notice the fat tissue replica looks larger than the same weight of muscle.</p>
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	<p><i>Show heart replica</i> This is one of our most important muscles, the heart! Remember that it needs to be cared for like our other muscles!</p> <p>To grow, muscles need food from the protein group. Do you remember which foods give us protein? <i>Foods from dairy, meat and beans.</i></p> <p>Muscles also need energy. Do you remember what foods give us energy? <i>Grains, fruits, vegetables</i></p> <p>Grains, fruits and vegetables provide carbohydrates. Carbohydrates give us energy the same way that gasoline makes a car go. If we don't eat enough, we don't have energy to go.</p>
<p>Families engaged in a variety of physical activity.</p>	<p>Besides food, what else do muscles need to be strong and healthy? <i>Exercise or physical activity</i></p> <p>For muscles to stay strong and healthy we need to be physically active for 60 minutes per day. We are going to do some exercises to help muscles build strength and flexibility. <i>Ask students to stand. Give each a dynaband. Instruct students to wrap one end around their hand once. Put the other end under foot. And do bicep curls. Next ask students to put one arm over head and reach behind back with other arm and do tricep extensions. Ask if they are feeling their muscles stretch. When finished collect dynabands.</i></p> <p>This type of exercise is resistance exercise. You also need to make sure your getting aerobic exercise. Aerobic exercise makes you breath hard? Can you think of some exercise that make you breath hard? <i>Running, biking, swimming, basketball, dancing, skating.</i></p> <p>What are some things you can do to increase physical activity? <i>Pause for response.</i></p>
	<p>What are two things your muscles need to be strong and healthy? <i>Eat right and exercise!</i> <i>Eat dairy, meat and beans for protein and grains, fruits and</i></p>

vegetables for energy (carbohydrates), and exercise!

Script for grades 4-6:

Station 9 - Muscles	
Graphics	Script
Muscles in the body.	<p>Does anyone know how many different muscles we have in our bodies? <i>636</i></p> <p>Muscles need food to grow and to have energy to work. Here you will uncover clues to help you give your muscle's what they need to help you grow and go.</p>
Farmer Pete flexing arm muscle.	<p><i>Flex left arm and place right hand on bicep muscle.</i> Flex your left arm and place your right hand on top of the muscle. Straighten and bend your arm. Do you feel the muscle moving? What is the name of the muscle? <i>Biceps muscle</i></p> <p>Now feel the muscle on the bottom of your arm above your elbow. Do you know what it is called? <i>Triceps muscle</i></p>
Heart Muscle	<p><i>Show Heart model</i> This is one of the most important muscles in our body. One of the heart's main jobs is to pump blood to all of the organs and tissues in our body. It is the size of a fist. Does anyone know how many miles of blood vessels the heart pumps blood through? <i>60,000 miles!!</i></p> <p>We want to make sure we keep our heart healthy since it is such a major muscle. What are some things we can do to take better care of our hearts? <i>Eat right and exercise</i></p> <p>That's right! What are some healthy foods we can eat to keep our heart, and our other muscles healthy? <i>Protein, low-fat dairy, fruits and vegetables, whole grains</i></p> <p>Good job! Foods that contain carbohydrates and protein help provide energy for our muscles.</p> <p>How often should we exercise to keep our heart and other muscles healthy? <i>60 minutes/day</i></p>

	<p>When we are physically active, we can check our pulse to see how hard our heart is working. For most kids your age, our Target heart rate should be between 100-179. Does anyone know how to check your Target heart rate?</p> <p>Find your pulse in your wrist or neck using your index finger and middle finger. Count the number of beats for 10 seconds and then multiply by 6. If the number is between 100-179, that means you have gotten a good work out! Let's practice. Let's run in place for 1 minute and then take our pulse. <i>(First have students practice finding their pulse. Have them run in place for 1 minute and then have them stop and count their pulse for 10 seconds). The students can then multiply by 6 to find their number of beats per minute).</i></p>
<p>Families engaged in a variety of physical activity.</p>	<p>Great job! We also want to make sure that we keep our other muscles strong.</p> <p>This is what one pound of muscle tissue looks like. <i>(Show muscle replica).</i></p> <p>And this is what one pound of fat tissue in our body looks like. <i>(Show fat replica).</i></p> <p>We need to exercise so we gain muscle instead of fat tissue.</p> <p>Notice the fat tissue replica looks larger than the same weight of muscle.</p> <p>Muscle fibers are made of proteins that make the muscle fibers contract to build larger muscles.</p> <p>What two nutrients are especially important for muscles? <i>Protein and carbohydrates</i></p> <p>Why is exercise important for muscle health? <i>Exercise strengthens muscles and keeps them flexible.</i></p> <p>Good job. You are excellent at discovering clues leading to Operation Health.</p>

Station 8 - Bones

Key Concepts:

1. Dairy group foods build hard and strong bones.
2. Exercise helps bones be strong.

Key Outcomes:

Students will be able to

1. Name foods from the dairy group that contribute to bone health.
2. Know three servings of milk/dairy foods are recommended.
3. Identify a weight bearing exercise.

Student Activities:

Students identify dairy food groups that build strong bones.

Students (grades 4-6) observe a model of healthy and weak bones.

Suggested Costume for Presenter:

Hard hat and tool belt

Script for grades K - 3:

Station 8 - Bones	
Graphics	Script
Skeleton	<p>Welcome to the bone station where we build strong bones.</p> <p>Why do we need strong bones? <i>To hold up our body.</i></p> <p>Feel your ear lobe. If we didn't have bones our whole body would feel that way. We would be like jelly fish!</p>
Pictures of dairy foods Low-fat milk Cheese yogurt	<p>I'm really glad you are here because this bone has holes in it. <i>Refer to wooden bone model.</i></p> <p>I've been trying to fix it with my tools but it just isn't working. What do you think I need? <i>Foods from the milk/dairy group, milk, cheese, yogurt.</i></p> <p>Look at your food sticker, and raise your hand if you are a milk group (blue sticker). <i>Ask a student with a milk/dairy group sticker to choose a food block to place in the bone hole. Choose other students to place the remaining dairy food blocks in the bone.</i></p> <p>Why didn't any of you choose the soda can?</p>

	<p><i>Soda is not in the milk/dairy group.</i> <i>The soda can did not fit into the hole.</i> Soda is not in the milk/dairy group. And, it doesn't have any calcium in it. Only foods with calcium can fill holes in the bones. What do you think would happen if you drank soda instead of milk? <i>Bones would have holes; bones would not be strong.</i></p>
<p>Farmer Pete surrounded by dairy foods.</p>	<p>How much milk do you need each day to build strong bones? <i>Three servings.</i></p> <p>Do all three servings have to be milk? <i>Pause for responses.</i></p> <p><i>Refer to the milk group blocks in the bone model.</i> No - you can mix and match. It's okay to have 2 glasses of milk and a slice of cheese, or 1 glass of milk and a piece of cheese and carton of yogurt. They all work to build strong bones.</p> <p>When would be three good times during the day to drink milk or eat dairy foods? <i>Breakfast, lunch, dinner, snack</i></p> <p>If you choose to drink milk with your breakfast, lunch and dinner you will get enough calcium to have strong bones.</p>
<p>Students engaged in a variety of physical activity.</p>	<p>Do you know something else bones need to be strong? <i>Exercise</i></p> <p>To be strong bones also need weight bearing exercise. Weight bearing is any activity you do on your feet that works your bones and muscles. What are examples of weight bearing exercise you enjoy? <i>Pause for one or two responses. Correct responses include running, riding bike, skateboarding, soccer, dancing, etc.</i></p> <p>Now let's practice a weight bearing exercise. Can you all stand-up and spread out were going to do Calcium Jacks. These are jumping jacks while spelling Calcium.</p>
	<p>You have one more adventure in the Farm to You journey. To get there you are going to slip through the hand bones.</p>

Script for grades 4-6:

Station 8 - Bones	
Graphics	Script
Skeleton	<p>Welcome to the bone station. Here you will learn the clues to help you build strong and healthy bones.</p> <p>Building bones is a big job because our bodies have 206 different bones. <i>Refer to the skeleton on the flip chart.</i></p> <p>Bones are long, short, thick and thin. Over half of our bones are in our hands and feet. Do you know where the smallest bone in your body is? <i>Ear</i></p> <p>Feel your ear lobe. If we didn't have bones our whole body would feel that way. We would be like jelly fish!</p>
Picture of a bone	<p>What nutrient builds strong bones? <i>Calcium</i></p> <p>About 99% of the calcium in our body is in the bones. The other 1% is in the blood and muscles.</p> <p>Do any of you ever have muscle cramps? <i>Briefly pause for show of hands.</i></p> <p>Muscle cramps are a clue you may not be getting enough calcium.</p> <p>Bones act like a calcium bank for the blood and muscles. When you get enough calcium in your diet, specialized cells called osteoblasts use the calcium to build bone tissue.</p> <p>When calcium is low in your diet (such as when you don't drink enough milk), special bone cells called osteoclasts dissolve bone tissue so that the calcium can move into the blood and muscles.</p> <p><i>Show osteoporotic side of small bone model in the following dialogue.</i></p> <p>When bones dissolve more than they grow, we get holes in our bones. This condition is called osteoporosis.</p> <p><i>Compare the osteoporotic side of the bone model to the healthy side. Point out the healthy bone has more</i></p>

	<p><i>connections and fewer and smaller open places. Calcium helps build the connections.</i></p> <p>Which kind of bone do you think breaks more easily? <i>Osteoporotic bones, or the bone with fewer connections.</i></p>
Farmer Pete surrounded by dairy foods.	<p>How much milk does it take each day to keep bones strong? <i>Three servings.</i> <i>Show the milk carton, slice of cheese and yogurt blocks.</i></p> <p>Do all three servings have to be milk? <i>Pause for responses.</i></p> <p>No - you can mix and match. It's okay to have 2 glasses of milk and a slice of cheese, or 1 glass of milk and a piece of cheese and carton of yogurt.</p> <p>Do you think this can of pop is good for building strong connections in bones? <i>Pause for responses.</i> No is right. What nutrient is it lacking? <i>Calcium.</i></p>
Students engaged in a variety of physical activity.	<p>What other health habit is needed for strong bones? <i>Exercise or physical activity.</i></p> <p>To grow stronger bones also need weight bearing exercise. Weight bearing is any activity you do on your feet that works your bones and muscles. What are examples of weight bearing exercise you enjoy? <i>Pause for one or two responses. Correct responses include running, riding bike, skateboarding, soccer, dancing, etc.</i></p> <p>Now let's practice a weight bearing exercise. Can you all stand-up and spread out were going to do Calcium Jacks. These are jumping jacks while spelling Calcium.</p>
	<p>You have one more set of clues to discover in the journey from Farm to You: Operation Health. To find them carefully slip through the hand bones there on the wall.</p>

Station 9 – Skin

Key Concepts:

1. Frequent hand washing is important to good health.
2. Protect skin from burns, cuts, scrapes and bruises.

Key Outcomes:

Students will be able to

1. Identify important times to wash hands.
2. Know importance of using sun screen.
3. Know importance of wearing helmets and pads when riding and skating.

Student Activities:

Students use Glo-germ gel to experience how germs are spread.

Suggested Costume for Presenter:

Large sun or straw hat for female, ball cap (4-H) for males.

Script for grades 1-3:

Station 9 - Skin	
Graphics	Script
Highlighted picture of skin	<p>You are now on the skin. Skin has a big job. It covers all of the other body parts you have visited, so it needs good care.</p>
Calendar with fruit on every day.	<p>You can take care of your skin from the inside and the outside.</p> <p>What is one way you can take care of your skin from the inside? <i>Eat fruits and vegetables.</i></p> <p>Fruits and vegetables give us vitamin A and vitamin C. Vitamin A helps keep skin smooth. Vitamin C helps heal cuts and scratches on our skin.</p> <p>Vitamin C doesn't stay in our bodies for very long, so be sure to eat fruit and vegetables everyday.</p>
Or children riding bikes and wearing protective equipment.	<p>We also need to take care of the outside of our skin. How are the kids in this picture protecting their skin? <i>Wearing helmets and knee and elbow pads.</i></p> <p>That's right. Remember to wear a helmet and knee and elbow pads anytime you are doing an activity where you can</p>

	<p>fall. If you do scrap or cut your skin, what foods can help you heal faster? <i>Fruits and vegetables</i></p>
<p>Picture of a person with sunburn and person wearing sunglasses and hat.</p>	<p>Which of these persons is protecting their skin from the sun? <i>The person wearing the hat and sunglasses.</i></p> <p>If you are outside when the sun is hot remember to wear a hat and to use sunscreen lotion.</p>
<p>Hands being washed</p>	<p>Another way to protect our skin is to keep it clean. Does anyone see any germs around here? <i>Refer to hand graphic on wall with "green bacteria".</i></p> <p>Can you see germs on your hands? <i>No</i></p> <p>We can see stuff like dirt, but we can't see germs. <i>Ask students to stand up and divide. Allow a few seconds for each student to place hands in black light box to view "fluorescent germs". Ask students to sit down after viewing "germs".</i></p> <p>Did everyone have germs on their hands? <i>Yes</i></p> <p>How did the germs get on their hands? <i>They got the germs from touching things throughout the exhibit. Like the food models, giant teeth, floor and all the props.</i></p> <p>When should you wash your hands? <i>Before eating, after using the restroom, after playing with pets, etc.</i></p> <p>What do you need to wash your hands thoroughly? <i>Warm water, soap and rubbing.</i></p> <p>How long should you wash your hands? <i>20 seconds or about the time it takes to sing "Happy Birthday".</i></p>
	<p>This is the end of food's journey from <i>Farm to You</i>. Thank you for being good listeners. Your teacher has an activity book and newsletter to help you remember where food comes from and how it helps make your body strong and healthy. Be sure to take it home and share what you have learned with your parents.</p>

Script for grades 4-6:

Station 9 - Skin	
Graphics	Script
Highlighted picture of skin	Welcome to the final destination of the Farm to You: Operation Health adventure. Your job here is to find the clues for keeping skin healthy.
Calendar with fruit on every day.	<p>We take care of skin from both the inside and outside.</p> <p>What is one way you can take care of your skin from the inside? <i>Eat fruits and vegetables.</i></p> <p>What are two vitamins fruits and vegetables provide? <i>Vitamin A and vitamin C.</i></p> <p>Do you remember the jobs vitamin A and C do in the body? <i>Vitamin A helps keep skin smooth. Vitamin C helps heal cuts and scratches.</i></p> <p>Here is an important clue: Vitamin C doesn't stay in our bodies for very long, so you must eat fruits and vegetables everyday.</p>
Children riding bikes and wearing protective equipment.	<p>We also need to take care of the outside of our skin. How are the kids in this picture protecting their skin? <i>Wearing helmets and knee and elbow pads.</i></p> <p>That's right. Remember to wear a helmet and knee and elbow pads anytime you are doing an activity where you could fall. If you do scrap or cut your skin, what foods can help you heal faster? <i>Fruits and vegetables</i></p>
Picture of person with sunburn.	<p>Which of these persons is protecting their skin from the sun? <i>The person wearing the hat and sunglasses.</i></p> <p>If you are outside when the sun is hot remember to wear a hat and to use sunscreen lotion.</p>
Hands being washed	<p>Another way to protect our skin is to keep it clean. Does anyone see any germs around here? <i>Refer to hand graphic on wall with "green bacteria".</i></p> <p>Can you see germs on your hands? <i>No</i></p>

	<p>We can see stuff like dirt, but we can't see germs. <i>Ask students to stand up and divide. Allow a few seconds for each student to place hands in black light box to view "fluorescent germs". Ask students to sit down after viewing "germs".</i></p> <p>Did everyone have germs on their hands? <i>Yes</i></p> <p>How did the germs get on their hands? <i>They got the germs from touching things throughout the exhibit. Like the food models, giant teeth, floor and all the props.</i></p> <p>When should you wash your hands? <i>Before eating, after using the restroom, after playing with pets, etc.</i></p> <p>What do you need to wash your hands thoroughly? <i>Warm water, soap and rubbing.</i></p> <p>How long should you wash your hands? <i>20 seconds or about the time it takes to sing "Happy Birthday".</i></p>
	<p>There were three clues to help you keep your skin healthy. What are they? <i>Eat fruits and vegetables</i> <i>Protect skin from sun, scraps and cuts.</i> <i>Wash hands or keep skin clean.</i></p> <p>Thank you for your hard work during the Farm to You: Operation Health adventure. Your teacher has an activity newsletter to help you remember the clues you need to know to keep your body strong and healthy. Be sure to take it home and share the clues with your family.</p>